REMARKS

By this Amendment, claims 1-81 are pending. Claims 1-81 are currently amended. Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

I. Claim Objections

The Examiner objected to claims 2-27, 29-54, and 56-81 because of the preamble language, "The invention in claim."

Applicant has amended the preamble of each of these claims and respectfully requests that the Examiner's objection be withdrawn.

II. Claim Rejections – 35 U.S.C. § 103

The Examiner rejected claims 1-81 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,516,324 to Jones et al.

Applicant respectfully traverses the rejection. However, Applicant has amended independent claims 1, 28, and 55 to more precisely describe embodiments of the present invention. Further, Applicant has amended various other dependent claims to more precisely describe embodiments herein.

A. Applicant's Invention

Embodiments of the present invention provide for OLAP (online analytical processing) capabilities without the use of OLAP tools or prerequisites for OLAP operations, such as a multidimensional database. As recited in amended independent claims 1, 28, and 55, in response to a retrieval request from a graphical user interface (GUI), a plurality of disparate digital databases are accessed, and dynamically on demand requested data is received from such databases.

The disparate nature of the above databases refers to an absence of compatible keys or record identifier (ID) columns of similar value or format in the schemas or structures of the database that would otherwise enable linking data within the constituent databases. An example of such a common key value is a social security number that would enable linking or relational database "join operations" on an individual's personnel data with his or her insurance plan. In embodiments of Applicant's invention, such a common key value is not necessary. This disparate nature extends, for example, to the type of database (e.g. Oracle, IBM DB2, Microsoft SQL Server or Object Databases) and the structure, schema, and nature of the databases (i.e. type of data fields in various tables of the constituent databases).

An OLAP cube of the retrieved data is assembled dynamically on demand with a computer and without accessing any multidimensional database(s) of stored or persisted retrieved data assembled a priori. The dynamic on demand nature of the assembly of the OLAP cube in embodiments of Applicant's invention means that the OLAP cube is assembled dynamically upon access of the functionality of Applicant's invention by a user. As a result,

the cube contains the most current data and is not subject to any latency or "out-of-date" values, which is a drawback of conventional OLAP technology. The OLAP cube is then displayed using the GUI. Accordingly, Applicant's innovations supersede conventional and currently available OLAP technology.

B. Jones et al.

Jones et al. discloses "a generalized report and chart definition tool based on OLAP … software. The OLAP-based reporting provides support for a multitude of different reports." (Col. 8, lines 62-65.) Operational data, which may originate from MSA contract database 24 and scanner & contract database 30 (FIG. 2), is stored in one multidimensional database.

The singular multidimensional database, not the databases 24 and 30, is used to assemble and store OLAP cubes that contain data for respective reports. (Col. 9, lines 19, 33-34; claims 1, 8, 15.) This assembly, population, and updates are carried out offline or "run after midnight." (Col 8, lines 5-8.)

Further, the component databases in Jones et al. rely on common keys that relate the data between the different tables and databases. (Col 8, lines 8-60.)

To display a report, a user at a web page selects a desired report from a drop-down list. The multidimensional database, not the databases 24 and 30, is then queried, and the desired report is displayed. (Col. 10, lines 8-35.)[1]

[1] See also claim 1 ("storing said operational data in a multidimensional database at said central service facility; … at said central service facility, performing on-line analytical processing on said stored logged

C. Applicant's Claimed Invention Is Not Obvious Over Jones et al.

Jones et al. does not disclose, teach, or suggest embodiments of Applicant's invention, as claimed in independent claims 1, 28, and 55. In particular, Jones et al. does not disclose, teach, or suggest: (1) in response to a retrieval request, accessing a plurality of disparate digital databases (see A and B above) and retrieving with a computer requested data from such databases, or (2) wherein an OLAP cube is assembled dynamically on demand without accessing a multidimensional database of stored retrieved data constructed and persisted or stored a priori.

1. Plurality of Databases: Jones accesses only one database.

In Applicant's claimed invention, a retrieval request from a GUI results in accessing a plurality of disparate databases (see A above) in a parallel or distributed manner.

In contrast, in Jones et al., a retrieval request from a GUI results in accessing only one singular database—the multidimensional database—not a plurality of disparate databases as in Applicant's claimed invention. Source data from the databases 24 and 30 is used to populate the multidimensional database a priori or offline. Then, a retrieval request accesses the multidimensional database, and the original source databases 24 and 30 are left untouched. (Col. 9, lines 19, 33-34; col. 10, lines 8-35; claims 1, 8, 15.)

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data as a function of a multidimensional query and other parameters selected by said user on said standard reports web page; and downloading a report to said computer at said remote site, said report being the result of said on-line application processing step.").

2. Multidimensional Database: Jones cannot update original source databases.

In Applicant's claimed invention, an OLAP cube is assembled dynamically on-demand without accessing a multidimensional database of stored retrieved data. Instead, an OLAP cube is dynamically assembled on demand based upon user-requested primary and correlated datasets. (See, e.g., present specification at page 5, lines 16-19.)

In contrast, in Jones et al., an OLAP cube is assembled using an OLAP tool and prerequisite, namely, one singular multidimensional database, which is built a priori by Jones from original source databases 24 and 30. All data extracted and presented to a user in Jones et al. results from the execution of MDXQueries (Microsoft's OLAP multidimensional expression queries) to the multidimensional database with user-defined parameters for report generation. Queries are made to preassembled and a priori populated data in OLAP cubes residing in the singular multidimensional database.

When the one multidimensional database is created by Jones, Jones loses track of where the data records (fields and values) of data came from in the original source databases 24 and 30. This is a well-known feature and drawback of current OLAP technology that Jones utilizes. Therefore, the user in Jones et al. cannot use the GUI and the one multidimensional database to make updates to the original source databases 24 and 30. (Col. 9, lines 19, 33-34; col. 10, lines 8-35; claims 1, 8, 15.)

3. Applicant's Innovations: A user can update original source databases with Applicant's invention.

Among other things, Applicant's technology delivers OLAP capability without the use of OLAP tools or prerequisites, such as an intermediate multidimensional database.

In addition, the technology dynamically assembles requested data on demand from a plurality of disparate source databases, the number and type of which depend on user-requested selected primary and correlated datasets.

Further, Applicant's technology facilitates bidirectional data communication between source databases and a client application represented by a GUI: (1) source database data is aggregated (read) for display on the GUI, and (2) the user's manipulation of the GUI can update data within the source databases. Technologies such as Jones et al. provide for only unidirectional data communication, where only (1), and not (2), is achieved. In other words, technologies such as Jones et al. are read-only, and a user cannot affect the original source databases via the GUI.

See, for example, Applicant's specification at pages 4-6.

4. Conclusion

For at least the above reasons, Jones et al. does not disclose, teach, or suggest all the limitations of independent claims 1, 28, and 55. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. § 103(a) should be withdrawn.

Claims 2-27, 29-54, and 56-81 respectively depend from claims 1, 28, and 55. The rejection of these claims should be withdrawn for at least the above reasons.

CONCLUSION

Applicant submits that the present application is in condition for allowance and respectfully request favorable action in the form of a Notice of Allowance. Should the Examiner believe that this application is in condition for disposition other than allowance, the Examiner is requested to contact the undersigned at the telephone number listed below in order to address the Examiner's concerns.

Dated: _____

Respectfully submitted,

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